high notes, green. The form of these subjective images also depends upon the color of the surface upon which they appear. Such an image, if it be looked at through two differently colored glasses (*e. g.*, red before one eye, green before the other), becomes decidedly changed in color through some stimulus, *e. g.*, a tone, passing from red to green, showing a mixture of colors or colored spots. If three differently colored adjacent fields are looked at and a stimulus is made to affect the body, a particular one of the fields, according to the nature of the stimulus—*e. g.*, the pitch of the tone—enlarges, contracts, or even disappears. The color of optical after-images is also changed by various stimuli. In this way a positive after-image may be changed into a negative one; so, likewise, after-images looked at at the same time through two differently colored glasses are changed by stimuli (auditory, gustatory, tactile, etc.); in color they appear mixed or parti-colored. It is an interesting fact that acoustic after-images are able to modify optical images in an analogous manner. When a colored surface is looked at subjective images—*e. g.*, spots, geometrical figures, etc.—appear thereon, determined by various stimuli. It is a strange fact that they may be excited even by the remembrance of a tone. They then correspond to the after-image which arises when the tone is actually heard. A white surface changes, if a colored one is strongly called up in imagination, into that color, and after-images also appear. An after-image already present may be changed in color if that color is called up in imagination. If, while regarding a subjective colored surface another color is thought of, the surface goes over first into a mixture of the two colors, and finally into that of the second. It is possible in this way to mingle objective colors with subjective. An actual red surface appears violet if blue be called up in imagination.

The Cosmetic Value of Paraffin Injections after Enucleation of the Eyeball.—RAMSAY, Glasgow (*Lancet*, January 31, 1903), records his experience in the use of paraffin in 22 cases for forming a stump on which to fit an artificial eye. His method of procedure is as follows: The conjunctiva is divided as close as possible to the corneal margin. Each rectus muscle is caught up on a strabismus hook and sutured to the overlying conjunctiva with a strand of catgut. The tendons of the recti muscles are cut at their insertion into the sclerotic, and thereafter the operation for the removal of the eyeball is completed in the ordinary manner. The capsule of Tenon is packed with gauze till a strong black silk purse suture has been passed around the conjunctival margin, and then, the packing being removed, the melted paraffin is injected with a carefully sterilized glass syringe, the capsule being opened to its utmost capacity by holding the recti muscles on the stretch by means of the four catgut sutures and filled to overflowing. The purse suture is then tightened and securely fixed by a double knot, and the catgut sutures are tied, the superior rectus muscle being approximated to the inferior and the internal to the external.

This operation is followed by very little inflammatory reaction. The purse suture is removed in two weeks, at which time there will be found over the freely-movable paraffin stump a clean, non-discharging surface of conjunctiva. A week later an artificial eye can be adjusted.

To ensure success two points require special attention. First, the operation must be carried out with every precaution against sepsis, and so it must not be attempted in cases where the eyeball is in a state of active suppuration; and, secondly, the sutures must hold the conjunctiva in accurate position over the paraffin. It is important to see that an equal grip is taken of the conjunctiva all around the free edge, and that too wide an interval is not left between the stitches.

There were four failures in Ramsay's 22 cases. In one case after the enucleation of a supporting eyeball pus appeared in the socket and set up so much inflammatory reaction that the stitches were removed and the moulded paraffin allowed to escape. In 3 cases the paraffin came out through inefficiency of the stitching. The 18 remaining cases gave a satisfactory cosmetic result, with free movement of the prothesis.

PATHOLOGY AND BACTERIOLOGY.

UNDER THE CHARGE OF

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Symposium on Snake Venom: 1. The Poison of Serpents, MITCHELL. 2. Venom and Antivenene, MCFARLAND. 3. A Comparative Study of Snake Venom and Snake Sera, NOGUCHI (*Proceedings of the Pathological Society of Philadelphia*, February, 1903, vol. vi., No. 4).—Mitchell opened this symposium with an interesting historical introduction. Bonaparte had indicated the albuminous character of snake poison in 1843. Mitchell began his researches on snake venom in 1857, and at intervals continued them until 1899, both alone and in connection with Reichert and Stewart. The general toxicity, pathology, and action of venom on the blood were so completely worked out as to leave only a few points undetermined. During the last two years Flexner and Noguchi have worked on snake poison in the light of the recent important theories of immunity inaugurated by Bordet and Ehrlich.

Calmette has succeeded in immunizing horses against cobra poison by heating the venom to 70°, which removed the local irritating poison while not affecting the neurotoxin. McFarland began immunizations with cobra venom on Calmette's principle. On turning his attention to immunization against rattlesnake venom, an extremely irritative local poison made the injection of large animals wellnigh impossible. At the end of a year, however, the horse serum possessed protective powers against the neurotoxic